

REMARKS

Claims 6, 7 and 12 have been amended. Claims 1, 5-7, 11-13 and 15-19 remain for further consideration. No new matter has been added.

The objections and rejections shall be taken up in the order presented in the Official Action.

1. Acknowledgement of the election is noted and appreciated.
2. Claims 6, 7 and 12 currently stand rejected under 35 U.S.C. §112, second paragraph for allegedly failing to particularly point out and distinctly claim the subject matter deemed to be the present invention.

The claims have been amended to obviate this rejection.

- 3-4. Claim 1 currently stands rejected under 35 U.S.C. §102 for allegedly being anticipated by the subject matter disclosed in U.S. Patent 5,459,398 to Hansen et al (hereinafter "Hansen").

Claim 1 recites a method that includes:

“comparing the amplitude of the pulses of the pulse train output signal with a first variable switching threshold value; and
adjusting said switching threshold value when the difference between the amplitudes of the pulses and said switching threshold value exceeds a fixable first maximum value.” (cl. 1, emphasis added).

Significantly, claim 1 recites comparing the amplitude of the received pulse and the present threshold value. In contrast, Hansen merely discloses setting the threshold as a function of rotational speed. Hansen never makes a comparison using the voltage signal from the sensor to set the threshold. Accordingly, a fair and proper reading reveals that Hansen never computes the difference between the threshold signal and a signal indicative of the pulse amplitude in order to control the threshold.

A 35 U.S.C. §102 rejection requires that a single reference teach each and every element of the claimed invention. Hence, Hansen is incapable of anticipating claim 1 since it fails to disclose (or even suggest) *“comparing the amplitude of the pulses of the pulse train output signal with a first variable switching threshold value”*. (cl. 1).

5. Claims 1 and 5 currently stand rejected under 35 U.S.C. §102 for allegedly being anticipated by the subject matter disclosed in U.S. Patent 5,650,719 to Moody et al (hereinafter “Moody”).

Claim 1 involves setting a variable threshold in order to detect rotational speed and angular position of a rotating wheel with a non-contact sensor. In contrast, Moody does not relate to a system or method involved in detecting rotational speed and angular position. Specifically, Moody discloses a proximity detection system (col. 1, line 9; col. 3, lines 33-36; col. 3, lines 49-50). In Moody, the Hall element operates at a constant rotational speed, and the voltage of the speed from the sensor is indicative of how close an object is to the rotating Hall element. Note the

constant signal frequency in FIGs. 2 and 4-6 of Moody. If the speed of the sensor in Moody is not constant, the system would not operate as a proximity detection system since the voltage of the signal from the sensor would be changing function of both (i) rotational speed and (ii) proximity of the object to the sensor. As a result, it would be impossible to produce a shadow graph that reflects the profile of the passing object (see col. 3, lines 49-50).

A 35 U.S.C. §102 rejection requires that a single reference teach each and every element of the claimed invention. Hence, Moody is incapable of anticipating claim 1 since it fails to disclose (or even suggest) a method of adjusting a detection threshold for detecting rotational speed and angular position.

6. The indication that claims 11, 13 and 15-19 contain allowable subject matter is noted and appreciated.

These claims have not been written into independent claim format since claim 1 is patentable for at least the reasons set forth above.

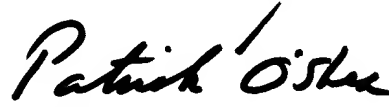
7. The indication that claims 6, 7 and 12 contain allowable subject matter is noted and appreciated.

These claims have been amended in view of the indefiniteness rejection. However, these claims have also not been written into independent claim format since claim 1 is patentable for at least the reasons set forth above.

For all the foregoing reasons, reconsideration and allowance of claims 1, 5-7, 11-13 and 15-19 is respectfully requested.

If a telephone interview could assist in the prosecution of this application, please call the undersigned attorney.

Respectfully submitted,

A handwritten signature in black ink, reading "Patrick O'Shea". The signature is written in a cursive style with a large, stylized "P" and "O".

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IN THE CLAIMS:

Amend claims 6, 7 and 12 as follows:

6.(amended) The method of claim 1, wherein said switching threshold is adjusted if the difference between the amplitudes of the pulses and said switching threshold exceeds said fixable first maximum, and at the same time the difference of the amplitudes of two successive pulses exceeds a fixable ~~third~~ second maximum.

7.(amended) The method of claim 1, wherein said switching threshold is adjusted if the difference between the amplitudes of the pulses and said switching threshold exceeds said fixable first maximum, and at the same time the difference of ~~the~~ frequencies of successive pulses exceeds a fixable ~~fourth~~ second maximum.

12.(amended) The method of claim 1, wherein said switching threshold is adjusted if the difference between the amplitudes of the pulses and said switching threshold exceeds said fixable first maximum, and at the same time the difference between the extremes or the amplitudes and the variable switching threshold exceeds a fixable second maximum, and at the same time the difference of the frequencies of successive pulses exceeds a fixable ~~fourth~~ third maximum.